

### Abstract

Chilled coolant is prepared by liquid coolant utilizing the latent heat generated by a gasification of liquefied propylene, for example, and this chilled coolant is used in heat exchangers which are used in a process for production of acrylic acid or acrolein. This method allows effective utilization of the latent heat which used to be discarded and permits a reduction of energy consumption of cooling required separately in the step for production. By recovering the chilled coolant with the liquid coolant, it makes possible to stabilize the gasification of propylene, etc. and consequently stabilize the production of acrylic acid. This invention consists of providing the method for the production of acrylic acid, etc. and the apparatus which make effective use of the latent heat generated in the steps of production.